

**REMARKS**

Claims 1-7, 9-16, 18 and 47-53 are presently are pending in the application. Claims 52 and 53 are added.

**I. Claim Rejections - 35 U.S.C. § 103**

Claims 1-7, 9-16, 18, 47-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Burgess (U.S. Patent 5,695,859) and Reeb (U.S. Patent 4,792,790) and further in view of Beigel et al (US Patent 6,888,502).

***Claims 1 and 10***

Claim 1 recites a communication apparatus comprising: “a first conductive layer; a second conductive layer; and a plurality of communication elements that are connected to the first conductive layer and the second conductive layer.” Fig. 5 of the Applicant’s drawings, for example, illustrates a cross-sectional view of one embodiment of a first conductive layer 20, a second conductive layer 30, and three communication elements 200 that are connected to the first conductive layer and second conductive layer and spaced out across the communication apparatus. Figs. 2A and 2B illustrate a perspective view of one embodiment of a communication apparatus showing the plurality of communication elements interspersed throughout the communication apparatus, a small portion of which are labeled (200a, 200b, 200c and 200d).

Claim 1 further states “a first communication element of the plurality of communication elements, initiating transmission to a second communication element....” Again, Figs. 2A and

2B illustrate one embodiment of a first communication element 200a initiating communication with a second communication element 200b.

The Applicant first notes that Burgess fails to disclose a first conductive layer and a second conductive layer with “a plurality of communication elements that are connected to the first conductive layer and the second conductive layer,” as recited in claim 1. None of the embodiments illustrated or described in Burgess disclose even one communication element that is connected to the first conductive layer and the second conductive layer. Instead, Burgess is designed with insulating layers which separate the conductive layers (for example, Figs. 3A, 5, 10) so that there is never any communicating element connected to both layers.

Burgess also fails to disclose “a first communication element of the plurality of communication elements, initiating transmission to a second communication element....” The Examiner cites to col. 14, lines 11-32 and Fig. 10 as disclosing the claimed feature, but Burgess lacks any disclosure of a communication element or where one communication element initiates a transmission to a second communication element. In the telephonic interview between the Applicant’s Representative and the Examiner on April 20, 2010, the Examiner indicated that it was the secondary receiver electrodes 74a in Fig. 10 which were being interpreted as equivalent to the communication element of claim 1. However, as the Examiner admitted, Burgess never discloses where one secondary receiver electrode initiates transmission to a second secondary receiver electrode. Plural elements 74a are not connected to any element that comprise first and

second conductors and do not communicate with other plural elements 74a. Therefore, the Applicant maintains that Burgess fails to disclose the features of claim 1.

As Burgess fails to disclose a first communication element “initiating transmission to a second communication element,” Burgess also fails to disclose “letting the second communication element to acknowledge a change in the voltage propagated around the first communication element as a signal,” as recited in claim 1. No part of col. 14 describes that the second communication element acknowledges a change in voltage propagated around the first communication element as a signal. As discussed above, the electrodes 74a simply do not communicate information with each other. In fact, since the cone 72a will deform in only a particular direction under weight of a user, only one of such electrodes 74a will ever be activated by the individual cone 72a.

The Applicant also maintains that the Examiner’s rejection improperly combines features of Burgess’ Figs. 1, 2 and 10 in rejecting claim 1. See Office Action, page 3, where the Examiner cites first to col. 14, lines 11-32 and Fig. 10, then immediately thereafter to col. 4, lines 60-67, col. 5, lines 1-27 and Fig. 1. The Examiner cannot combine different embodiments without motivation to do so. In re Kramer, 18 USPQ2d 1415, 1416 (Fed. Cir. 1991); Ex parte Beuther, 71 USPQ2d 1313, 1316 (BPAI 2003).

The Examiner does correctly concede that Burgess fails to teach a second communication element is assigned an ID identifying the element and that the communicated signal includes an ID identifying a recipient communication element to subsequently receive a signal. The

Examiner cites Reeb to make up this deficiency. However, Reeb does not disclose where “the signal includes an ID identifying a recipient communication element,” as recited in claim 1. Reeb is clearly unrelated to the present invention and is also clearly unrelated to the primary Burgess reference. Therefore, the reliance on Reeb cannot support the rejection. More particularly, Reeb relates to forming an RC resonance circuit in a simple form to tag articles. The emission of the RC frequency helps keeps items, such as items in a store, secure against theft. See Reeb, col. 1, lines 11-21; col. 2, lines 40-45. The Examiner’s citation to col. 19 and Fig. 30 of Reeb merely describes the adjustability of the RC signal. Even assuming *arguendo* that the RC emissions of Reeb comprise an ID, they do nothing to identify a recipient of a signal. The tags (alleged communication elements with ID) of Reeb also clearly are not attached to first and second conductive layers in any manner as required by claim 1. There would simply be no basis to make such a connection to common first and second conductor layers in Reeb. The Examiner has completely failed to provide any motivation to include a tag identifier of Reeb with the pressure sensor pad of Burgess.

The Examiner also correctly concedes that Burgess and Reeb fail to teach plural communication elements placed for communication without individual conductive wires. The Examiner newly cites to the microstrip antenna of Beigel to make up for this deficiency.

However, Beigel does not teach “wherein the plurality of communication elements can be placed for communication without individual conductive wires,” as recited in claim 1. Beigel provides several different embodiments of an “identification appliance” which includes a

microstrip antenna that may be constructed with a flexible printed circuit board (PCB). *Biegel*, col. 4, lines 14-15. In each of the illustrated embodiments of *Beigel* cited by the Examiner, from Fig. 3 – Fig. 7, *Beigel* describes a “communication circuit 32” which is connected by a wire via at least one “hole 40.” *See Beigel*, col. 8, lines 13-67, cited by the Examiner, which explicitly describes “...the wire passes through a hole 40 in the dielectric layer 26” (lines 23-24); “a hole 40 through the dielectric material 26 allows the communication circuit 32 to contact the ground plane 24...” (lines 32-33); and “a hole 40 extends through the conductive patch layer 22 and the dielectric material 26. The hole 40 gives the communication circuit access to contact the ground plane 24...” (lines 44-47). Fig. 6 and Fig. 7 both describe the presence of the communication circuits, but indicate that they are “not illustrated.”

Based on the above, it is explicitly apparent that *Biegel* discloses the use of wires to connect the communication circuit 32 in each embodiment. *Biegel* therefore fails to teach “wherein the plurality of communication elements can be placed for communication without individual conductive wires,” as recited in claim 1.

For all the above reasons, the rejection of independent claim 1 should be withdrawn. Claim 10 is patentable for analogous reasons, and the remaining claims are patentable based on their dependencies.

#### ***Claims 4 and 13***

The Applicant additionally maintains that with regard to claims 4 and 13, these claims describe that the ID includes the originating source. The Examiner alleges that *Reeb* teaches this

feature. However, no aspect of Reeb requires that a transmission signal include the originating source. For example, in order to prevent theft (removal of an article from a store), it is not necessary to know the source of a signal. It is sufficient to know that one (of many) tagged articles is being removed. Therefore, there is no requirement in Reeb that the originating source ID be included in the signal. Claims 4 and 13 are patentable.

***Claims 5 and 14***

The Applicant further maintains that with regard to claim 5 and 14, these claims describe communication among neighboring communication elements. The Examiner cites cols. 2 and 15 of Burgess as teaching this feature. The cited col. 2 merely teaches generally the more detailed embodiment of Fig. 10, col. 14. As discussed above, any electrode 74a-c does not communicate with neighboring communication units connected to conductive layers. Claims 5 and 14 are patentable.

***Claim 47***

The Applicant also maintains that with further regard to claim 47, this claim specifies that the plural communication elements do not overlap each other in the direction of disposition of the first and second layers. The Examiner cites a vertical stack of Burgess to teach features of claim 47. However, the cited portion of Burgess teaches the exact opposite of claim 47. Claim 49 is patentable for analogous reasons. The Examiner cites to Burgess at col. 10, lines 57-65, as teaching the features of claim 51, which recites the same features of claims 47 and 49. The Applicant notes, however, that this section of Burgess also fails to describe where elements are

laterally spaced so as to not overlap each other in a direction of disposition of the first and second conductive layers. It is clear that elements 74a and 74b-c of Fig. 10 of Burgess must overlap each other in order for the Burgess device to operate. Claims 47, 49 and 51 are patentable.

## **II. Newly Added Claims**

The Applicant herein adds claims 52 and 53, which further describe “wherein the plurality of communication elements each comprises a communicating unit, a processing unit and a memory.” Support for the newly added claims can be found in Fig. 4 and its corresponding description in the Specification on p.26, line 16 - p. 27, line 7.

The Applicant submits that neither Burgess, Reed nor Beigel teach or suggest where a communication element comprises a communicating unit, a processing unit and a memory. Therefore, the Applicant submits that claims 52 and 53 are allowable over the cited references.

## **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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